

**Name Of Work :- Constructing Dankheda to Himatpura Road Km. 0/0 to 2/200 (VR NP)****Ta.Waghodia Dist. Vadodara Under MGSY Normal (2025-26)****Taluka :Waghodia District : Vadodara****1 Constructing Dankheda to Himatpura Road Km. 0/0 to 2/200 (VR NP) Ta.Waghodia****Bill of Quantities**

Item No	Item of work	Quantities Estimated	Unit	Rate in Figures in Rs.	Amount
1	2	3	4	5	6
1	Clearing and grubbing of road length including up rooting wild vegetation, grass, bush shrubs, saplings and trees of girth up to 300 mm removal of stumps, of such trees cut earlier and disposal of unserviceable material and stacking of serviceable material (area of light density) by mechanical means in area of light jungle	1.50	Hectare	28455.09	42682.64
2	Waterproofing on top compacted ( as per relevant MoRD specification) original ground, sub Grade soil base, shoulders with Organosilane Nanotechnology & nano acrylic co-polymer with water (<1000 ppm TDS) in the ratio of 1 kg Organosilane Nanotechnology:1 kg nano acrylic co-polymer :200 liter water spray @ 3 liter /sqm in two spray applications (1.5 liter + 1.5 liter) as per direction of the Engineer-in-charge.	21510.00	Sqm	15.95	343084.50
3	Stabilized Sub-base: Providing, Laying, Spreading and Compacting in-situ/borrow area soil CBR> 5 or Equivalent up to 5% with stabilization. Application: (1) Rip and loosen soil with excavator / tractor operated ripper and scarify with tractor operated rotavator upto depth to achieve desired compacted thickness of 100 mm (2) Spread 1% LIME % + Cement 1 % by weight of soil and mix thoroughly (3) Apply 0.6 kg /cum organosilane Nanotechnology and 0.6 kg/cum of nano acrylic Co-Polymer mixed in OMC water (<1000 ppm TDS) on loose soil - cement mix. Scarify the material and compact it. (4).Compact the stabilized soil layer with 8 to 10 tonne vibratory roller to achieve the desired density. Rates include all material, labour, hire charges of machinery etc. as per MoRD specifications & direction of Engineer-in-Charge	870.00	Cum	1054.37	917301.90
4	Stabilized Base: Providing, Laying, Spreading and Compacting borrow area soil of CBR> 5 or Equivalent up to 5% mixed with 40% crushed aggregate/ GSB Grade 1 as per mix design. Application: (1) Spread and grade loose soil and aggregates with help of tractor operated rotavator and ripper as per mix design to achieve desired compacted thickness. (2) Spread 2% lime + Cement 2% by weight of soil -aggregates mix and mix homogenously with tractor operated rotavator and ripper (3) Apply 1 kg /cum organosilane Nanotechnology and 1 kg/cum of nano acrylic Co-Polymer mixed in OMC water (<1000 ppm TDS) on loose soil-aggregate - cement mix. Scarify the material with rotavator. (4) Compact the stabilized layer with 8 to 10 tonne vibratory roller to achieve the desired density. (5) Waterproof the top of the compacted stabilized base with organosilane & nano acrylic Polymer in the ratio of 1 kg organosilane :1 kg nano acrylic Co-Polymer : 200 liter water (<1000 ppm TDS) @ 3 ltrs/sqm in two spray applications (1.5 ltrs. + 1.5 ltrs.). Rates include all material, labour, hire charges of machinery etc. as per MoRD specifications & direction of Engineer-in-Charge.	1340.00	Cum	2144.24	2873281.60
5	Providing and laying compacted <b>WBM of Grading-II MCBT</b> metal of size 53 to 22.4 mm in required layers including using 24% stone screening 11.2 mm size and 8% stone dust as filler including spreading watering & consolidation by vibratory roller etc. as per MoRTH Specification complete as directed by Engineer - in - Charge.	645.00	Cum	1899.81	1225377.45
6	Providing and laying Compacted of Specified quarry Spall in side shoulder including carriage of material and spreading on prepared base including compacting as per Specification etc... complete.	241.00	Cum	525.20	126573.20

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1	2	3	4	5	6
7	Earthwork in cutting in all sorts of soil and soft murrum including conveying and spreading the stuff ,embankment as and where directed upto 200 Meters from the end of cutting with all required lead and lift.	5339.00	Cum	130.94	699088.66
8	Earthwork for embankment including breaking clods, dressing with all lead and lift and including watering rolling and consolidation of subgrade in layers at O.M.C. to required dry density including filling the depression which occur during the process using power roller 8T to 10T.(C) From Borrow area within 1.0KM. lead	11440.00	Cum	162.58	1859915.20
9	Rolling & watering of earthwork in layers with power roller including filling in depressions which occur during the process.	3204.00	cum	22.73	72826.92
10	Providing and laying evenly priming coat with emulsion bitumien SS1 (IS8887) at rate of 7.5 Kg / 10 Sq.M. etc complete as directed with all labour and materials	8270.00	Sq.mt	63.83	527874.10
11	Providing and laying Tack coat with Bitumen emulsion (RS-1) at the rate of 2.50 Kg / 10 Sq.M. on the prepare bituminous surface etc complete as directed with all labour and materials	16300.00	Sq.mt	13.74	223962.00
12	Providing & laying Bituminous grout 37.50 mm thick with asphalt of grade of VG-30 at the rate of 1.99% by weight of mix for mixing using B.T.Chips of required gradation including cleaning and heating asphalt premix materials by hot mix process in proper gradation and laying with paver finisher and consolidation by roller of 8 to 10 tonnes including cost of all materials, Asphalt,aggregates, labour Charges,royalty charges etc.completed as directed. including flushing key aggregate @0.13 Cum/10 Sq.m.	620.00	MT.	2510.76	1556671.20
13	Providing laying and rolling 25 mm thick open graded premixed bitumeneous carpet with B.T. aggregate as specified and using bitumen grade VG-30 for mixing with aggregate at the rate of 3.36 % i.e 33.60 kg/M.T. of total mix including heating and mixing in drum mix plant and spreading the same with paver finisher and consolidation with power roller including necessary firewood, oil, lubricants, labour charges etc. using contractor's own drum mix plant and equipment, tool etc. completed in accordance with the requirement of specification.	434.00	MT.	2965.36	1286966.24
14	Providing & laying Bitumen seal coat with 0.18 Cmt/ 10 Smt. of stone chips 6mm size & binder grade VG-30 content at the rate of 4.50 % by total weight of mix . Hot mix laying process is including heating the asphalt aggregate continuous batching, transporting the mix and spreading the same by paver finisher & consolidation with power roller including providing necessary fire wood, oil, lubricant, labour charges, higher charges of machinery etc, complete.	224.00	M.T	3459.05	774827.20
15	Providing and fixing ordinary Kilometer stone of precast C.C. 1:2:4 including necessary reinforcement as per I.R.C. type design in C.C. 1:4:8 including letter and paints etc. complete (For O.D. road V.R.)	3.00	Nos.	704.33	2112.99
16	Providing and fixing hectometer as per I.R.C. type design including painting, lettering etc. complete. (I)Fixing in C.C. 1:5:10	8.00	Nos.	356.50	2852.00
17	Providing and fixing guard stone as per I.R.C., type design including white washing etc. complete. (I)Fixing in 1:5: 10	452.00	Nos.	350.80	158561.60

Item No	Item of work	Quantities Estimated	Unit	Rate in Figures in Rs.	Amount
1	2	3	4	5	6
18	Citizen's information Board- Providing and fixing of typical information board as per instruction. Two MS plates of 1.6 mm thick, of 900 mm x 750mm size fixed at top & bottom duly welded with MS angles of 25 x 25 x 5 mm thick M.S plate shall be welded by two vertical M.S flats & four horizontal M.S flats 5 mm thick to 75 mm x 75 mm of 12 SWG square tubes posts duly embedded in cement concrete M-15 grade blocks of 600mm x 600mm x 750 mm, below ground level. Painting New letters & figure of any shade with ready mixed synthetic enamel paint of superior quality in required shade and colour, All sections of framed posts and steel tube will be painted with primer and two coats of epoxy paints as per detailed drawing	1.00	Nos.	22997.70	22997.70
19	Supply & fixing logo board of diamond size (600 X 600mm) 16 gauge & board plate size (900x 250mm) 16 gauge thick M. S plate and 2.40 meter deep length single angle 75x 75x 6 mm size including fitting and painting lettering with luminous colour as per drawing etc	2.00	Nos.	4491.47	8982.94
20	Direction sign (Junction board):-Providing and fixing sign boards made out of 2mm aluminium sheet; size 244 x 122cms. rectangle as per the design of IRC-67-1977 pre treated with phosphating process & acid etching; coated with one coat of epoxy primer and two coats of best quality epoxy paint; reflectorised with retro reflective sheeting as per latest M.O.S.T. Specifications; Letters and numerals should be as per IRC-30-1968, 3.1m long (2 nos) stand post and frame fabricated from suitable size iron angle of 50 x 50 x 5mm 75x75x6mm as required; painted with best quality epoxy coatings in black and white bends. the details of symbol or inscription / numerals for each board shall be as per the instruction of engineer in charge. The fixing at site shall be in 1:2:4 CC block of size 45 x 45 x 60cms. for each leg. including excavation curing etc. complete under the supervision of engineer in charge.(A) Engineer Grade(VR)...	4.00	Nos.	14831.71	59326.84
21	Supplying and fixing road sign board of M.S. plates and angle iron including painting, lettering etc. complete including fixing in C.C. 1:4:8 with necessary excavation etc. complete as per I.R.C. type design. (ii) Reflective type as per detailed drawing	8.00	Nos.	3072.99	24583.92
22	Road marking with hot applied thermoplastic paints with reflectorising glass beads on bitumin surface providing and laying a hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads @ 250gms per sqm area, thickness of 2.5mm is excluding of surface applied glass beads as per IRC:35-2015. The finished surface to be level, uniform and free from streaks and holes. zebra patta /bump patta lane/center line/ edge line/cut patta. The white colour marking should provide luminance coefficient on cement road shall be min 130 mcd/m2/lux and Asphalt road shall be min 100 mcd/m2/lux during the service life during the day time. The marking should meet the performance criteria for night time reflectivity, wet reflectivity and skid resistance as mentioned in the section-15 of IRC 35-2015. Warranty for the Retro reflectivity should be two years.	470.80	Sq.mt	367.72	173122.58
23	Village name sign :-Providing and fixing sign boards made out of 2mm aluminium sheet; size 90 x 60cms. rectangle as per the design of IRC-67-1977 pre treated with phosphating process & acid etching; coated with one coat of epoxy primer and two coats of best quality epoxy paint; reflectorised with retro reflective sheeting as per latest M.O.S.T. Specifications; Letters and numerals should be as per IRC-30-1968, 3.1m long (2 nos) stand post and frame fabricated from suitable size iron angle of 50 x 50 x 5mm painted with best quality epoxy coatings in black and white bends. the details of symbol or inscription / numerals for each board shall be as per the instruction of engineer in charge. The fixing at site shall be in 1:2:4 CC block of size 45 x 45 x 60cms. for each leg. including excavation curing etc. complete under the supervision of engineer in charge.(A) Engineer Grade.....	2.00	Nos.	5045.36	10090.72

Item No	Item of work	Quantities Estimated	Unit	Rate in Figures in Rs.	Amount
1	2	3	4	5	6
24	Hazard Marker Sign :-Providing and fixing sing boards made out of 2mm aluminium sheet; size 90 x 30cms. rectangle as as per the design/drawing attached (IRC) pretreated with phospheting process & acid etching; coated with one coat of epoxy primer and two coats of best quality epoxy paint; reflectorised with retro reflective sheeting as per latest M.O.S.T. Specifications; 3.1m long stand post and frame fabricated from suitable size iron angle of 35 x 35 x 3mm & 50 x 50 x 5mm painted with best quality epoxy coatings The fixing at site shall be in 1:2:4 CC block of size 45x45x 60cms. for each leg. including excavation curing etc. complete under the supervision of engineer in charge.(A)Engineer Grade .....	10.00	Nos.	2423.74	24237.40
25	Chevron sign :-Providing and fixing sign boards made out of 1.5mm aluminium sheet / 3mm ACP (Aluminum composite Panel); size 60x50cm rectangular as per design of IRC-67-2012. Pre treated with phospheting process & acid etching; coated with one coat of epoxy primer and two coats of best quality epoxy paint ; reflectorised with High Intensity Prismatic Grade retro reflectivesheeting of Type-4 as per ASTM D-4956 and latest M.O.S.T.Specifications; 3.3 mtr long stand post of Iron Angle 75 x 75 x 6mm / 65NB Circular MS Pipe as required and frame fabricated from suitable size iron angle of35x35x3mm; painted with bestquality epoxy coatings in black and white bends. the details of symbol or inscription / numerals for each board shall be as per the instruction of engineer in charge. The fixing at site shall be in 1:2:4 CC blockof size 45 x 45 x 60 Cms. for each leg including excavation, curing etc.complete under the supervision of engineer in charge. A warranty for 7 years for the Retro reflective sheeting from original manufacturer & a certified copy of 3 year outdoor exposure test report from third party test lab for the product offered shall be submitted by contractor. (A) Class-B Type-4 Retro Reflective sheeting	24.00	Nos.	3711.75	89082.00
26	Informatory Signs :-Providing and fixing sing boards made out of 2mm aluminium sheet; size 80 x 60cms. rectangle as per the design of IRC-67-1977 pre treated with phospheting process & acid teching; coated with one coat of epoxyprimer and two coats of best qualityepoxy paint; reflectorised with retro reflective sheeting as per latest M.O.S.T. Specifications; 3.1m long stand postand frame fabricated from suitable sizeiron angle of 35 x 35 x 3mm75x75x6mm as required; painted with best qualityepoxy coatings in black and whitebends. the details of symbol for eachboard shall details of symbol for eachboard shall be as per the instruction ofengineer in charge. The fixing at site shall be in 1:2:4 CC block of size 45 x45 x 60cms. for each leg. including excavation curing tec. complete under the supervision of engineer in charge.(A) Engineer Grade(VR)...	1.00	Nos.	3856.90	3856.90
27	Cat Eye / Road Stud / RPM: Supplying of Raised Pavement Markers made of polycarbonate and ABS moulded body and reflective panels with Micro prismatic lens (No Glass bead lens) capable of providing total internal reflection of the light entering the lens face and shall support a load of 13635 kgs. tested in accordance to ASTM D 4280 Type H and complying to Specifications of Category A of MORTH Circular No RW/NH/33023/10-97 - DO III Dt 11.06. 1997. The height, width and length shall not exceed 20 mm, 130 mm and 130 mm and with minimum reflective area of 13 Sqcm on each side and the slope to the base shall be 35 +/- 5 degree. The body of the marker should having finger grip for easy and accurate placement and application with epoxy / bituminous Adhesive as recommended by the manufacturer of the marker. The colour of the marker should be as per the IRC 35-2015 and as directed by Engineer-in-charge.	60.00	Nos.	217.40	13044.00
28	Type - A, "W" : Metal Beam Crash Barrier : Providing and erecting a "W" metal beam crash barrier comprising of 3 mm thick corrugated sheet metal beam rail, 70 cm above road/ground level, fixed on ISMC series channel vertical post, 150 x 75 x 5 mm spaced 2 m centre to centre, 1.8 m high, 1.1 m below ground/road level, all steel parts and fitments to be galvanised by hot dip process, all fittings to conform to IS:1367 and IS:1364, metal beam rail to be fixed on the vertical post with a spacer of channel section 150 x 75 x 5 mm, 330 mm long complete as per clause 810 including necessary excavation of Post, providing Levelling course M-10 (Size 0.65x0.65x0.10 m) & foundation concrete in M-200 (Size 0.5x0.5x0.15 + 0.3x0.3x0.70) as per requirement and instruction from engineer in charge.	80.00	Rmt	3052.22	244177.60

Item No	Item of work	Quantities Estimated	Unit	Rate in Figures in Rs.	Amount
1	2	3	4	5	6
29	Supplying and fixing reinforced concrete heavy duty non-pressure pipes with collars for culverts including setting and joining the pipes in C.M. 1:2 watering and laying (To level of slops of I.S. 458 / 1971 Class NP4 of following internal diameter.(i) 300mm dia.	15.00	Rmt	1053.39	15800.85
30	Supplying and fixing reinforced concrete heavy duty non-pressure pipes with collars for culverts including setting and joining the pipes in C.M. 1:2 watering and laying (To level of slops of I.S. 458 / 1971 Class NP4 of following internal diameter.(iii) 600mm dia.	15.00	Rmt	2706.60	40599.00
31	Providing & Fixing "Flood Gauge Post" on Causeway / dip having (Channel size 100 x 50 mm) i.e. CC 1:2:4 in headwall, i.e. Painiting & lettering with ordinary paint colour as per instruction of engineer in Charge.	2.00	No	1987.68	3975.36
32	Excavation for foundation upto 1.5M. depth including sorting out and stacking of useful materials and disposing of the excavated stuff upto 50 meter lead.(A) Loose of soft soil.	386.00	Cum	194.04	74899.44
33	Excavation for foundation in sand,gravel,clay soft soils and murrum etc. including shoring and strutting and dewatering as necessary and disposing of the excavated stuff as directed . (A) Depth up to 3.0 mt	2831.77	Cum	498.94	1412883.32
34	Providing and filling in foundation with ordinary Cement concrete M-100 mix and providing necessary vertical pin headers including formwork, vibrating, ramming and curing complete.	94.40	Cum	3306.84	312165.70
35	Providing and casting in situ ordinary cement concrete M-150 mix and providing necessary pin headers including shuttering, scaffolding, laying, vibrating, curing and finishing complete without V-Groves. (A) Height from 0.0 M. to 5.0 M.	264.60	Cum	3885.47	1028095.36
36	Providing and filling in foundation with ordinary Cement concrete M-150 mix and providing necessary vertical pin headers including formwork, vibrating, ramming and curing complete.	606.47	Cum	3677.41	2230238.84
37	Providing and casting in situ ordinary cement concrete M-200 mix and providing necessary pin headers including shuttering, scaffolding, laying, vibrating, curing and finishing complete without V-Groves. (A) Height from 0.0 M. to 5.0 M.	1975.08	Cum	4255.13	8404222.16
38	Supplying and fixing reinforced concrete heavy duty non-pressure pipes with collars for culverts including setting and joining the pipes in C.M. 1:2 watering and laying (To level of slops of I.S. 458 / 1971 Class NP4 of following internal diameter. (iv) 900 mm dia.	75.00	Rmt	4710.56	353292.00
39	Supplying and fixing reinforced concrete heavy duty non-pressure pipes with collars for culverts including setting and joining the pipes in C.M. 1:2 watering and laying (To level of slops of I.S. 458 / 1971 Class NP4 of following internal diameter. (x) 1800 mm dia.	150.00	Rmt	13368.45	2005267.50
40	Providing ISI Mark TMT bar Fe-500D reinforcement for RCC Work including bending, binding and placing in position complete as per detailed drawings for Solid slab, Abutment cap, dirt wall & Pier cap & Also for the (For Temperature Reinforcement of Abutment, Return & Pier)	8720.00	Kgs.	77.29	673968.80
41	Providing and casting in situ Controlled Cement concrete M-250 for average 75 mm thick wearing coat laid as directed including tamping ,vibrating, finishing, curing and filling in joints with bitumen complete.	38.86	Cum	5230.79	203268.50
42	Providing and fixing Number plate of Marble plate stone of required size set in C.M. 1:4 including finishing and engraving letters etc. completes.	1.00	No.	306.15	306.15

Item No	Item of work	Quantities Estimated	Unit	Rate in Figures in Rs.	Amount
1	2	3	4	5	6
43	Providing and filling sand behind abutment and between returns in layers as directed.	1065.58	Cum	456.56	486501.20
44	Providing and laying rubble aproan (each stone weight not less than 40 kg) including hand packing and filled in the interstices with quarry spall	286.92	Cum	1067.08	306166.59
<b>Rs. Three Crore Nine Lac Ninteen Thousand One Hundred Twelve And Seventy Seven N.P. Only</b>					30919112.77

I / We am / are willing to carryout the work at .....% above/Below percent (..... Percent above/Below) (Should be written in figure and words) of the estimated rates mentioned above. Amount of my / our tender worked out as under.

Estimated amount put to tender Rs: .....

Estimated amount put to tender Rs: .....

Deduct.....% below Rs: .....

Add.....% above Rs: .....

Net Rs: .....

Net Rs: .....

In Words .....

In Words .....

(Please strike out which ever is not applicable.)

#### Note :

- 1 The Contractor shall exhibit a board with detailed specification and details of work as directed by the Engineer-In-Charge for which no extra payment shall be made.
- 2 The labour cess will be deducted as per prevailing rules i.e. 1% of the work done.
- 3 GST and Income tax TDS will be deducted at a source while making payments of bills
- 4 In all R.C.C. Items in Rate Analysis Standard Cement Consumption has been taken as per Govt. G.R.: PRC-10/2017 Cement Consumption/16/C Date:11/05/2017 as stated in S.O.R. therefore in R.C.C. items where there is a change as per actual mix design the cost of difference of cement consumption have been deducted from the rate of original item at the rate of input rate mentioned in all the tender.

#### CERTIFICATE

Quantities rate and wordings of items are as per estimate and calculation in the Sch. - B are airthmatically checked.  
Above all items of "Schedule-B" with Item Description, Unit, Rate & Amount have verified by me and found order.

Tender clerk

Sr.Divisional Account Officer  
Panchayat (R & B) Division  
Vadodara

Dy.Executive Engineer  
Panchyat (R & B) Sub Division  
Waghodia

Signaturre of contractor  
with seal

Executive Engineer  
Panchayat (R & B) Division  
Vadodara